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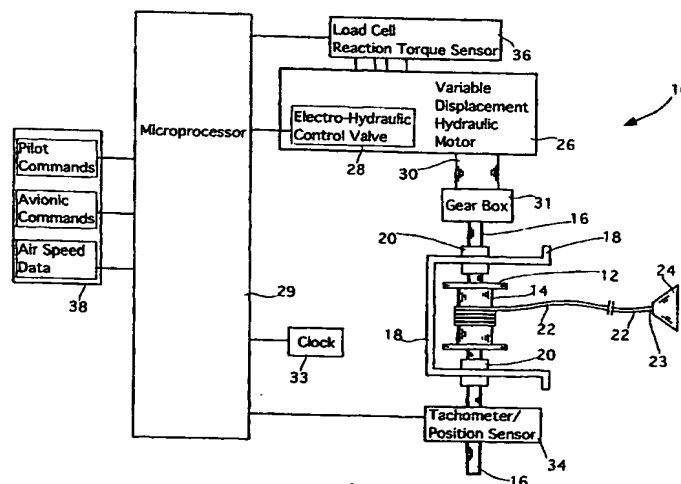
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(71) Applicant: BARTOV, Asher [US/US]; 603 N. Linden Drive, Beverly Hills, CA 90210 (US).

(74) Agent: SIEGEL, Ira, M.; Law offices of Ira M. Siegel, Suite 970, 433 N. Camden Drive, Beverly Hills, CA 90210 (US).

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(54) Title: APPARATUS AND METHOD FOR CONTROLLING AERIAL REFUELING HOSE



(57) Abstract: The invention is a variable displacement hydraulic motor-controlled hose reel drive system (10) for aerial refueling of a receiver aircraft from a tanker aircraft. The system includes a variable displacement hydraulic motor (26), a tachometer (34), position sensor (34), a reaction torque sensor (36) and a microprocessor (29) which, depending upon data received from the system's position and reaction torque sensors, sends appropriate signals to the motor. The invention is also a method for deploying a hose and drogue so as to reduce the likelihood that the hose (22) would go into oscillation after initial engagement of a receiver aircraft's probe with the drogue (24). In an embodiment of the invention, the hose (22) is retracted prior to hook up of the probe and drogue (24), and the force required to retract the hose (22) is recorded. After initial engagement of the probe with the drogue (24), the hose (22) is retracted until the force required to retract the hose rises to about the same force previously recorded.